

Amendment to the Specification:

Rewrite the carryover paragraph from page 7 to page 8 to read as follows:

In a specific embodiment, A may be any metal, semimetal, transition metal, or ceramic species including but not limited to Si, Zr, Hf, Nb, Ti, Ta, Cu, Ag, and Al, binary compounds such as GaAs or InP, ternary or ore more complicated compounds, and their oxides. A may be selected based on its ability to form monomeric active species, especially species with sufficient volatility to allow deposition from the vapor phase. X may be any active group, including but not limited to esters ~~such as --OCH₃~~, amides such as --N(CH₃)₂, organic acids such as --OAc, phenolates, thiolates, and phosphonates. R¹ may be any substituent that is inert to the reaction conditions.

Rewrite the third full paragraph on page 9 to read as follows:

More specifically, TEOS is reacted with an oxide surface, preferably a clean, dry surface, at a temperature from 180-220°C., though not limited to this temperature regime. In a specific embodiment, the reactants may be delivered in the vapor phase under reduced pressure. The reaction of TEOS with the oxide eliminates one to three molecules of ethanol for each TEOS reacted and creates a densely packed surface of ethoxy groups that are then accessible as a new exposed surface. The ethoxy groups may be reacted with any alcohol, which replaces the ethanol to form a new surface in its place. The ethanol released by the reaction process is volatilized and driven away by the heat of the process. As a result of the reaction, a densely packed layer that is inaccessible to water at environmental temperatures results. While unreacted ethoxy groups may remain, the hydrophobic layer renders them inaccessible to water through steric hindrance. Examples of alcohols that can form such a monolayer include decanol, octadecanol, oleyl alcohol, and ~~dodecadieneol~~ dodecadienol.

Rewrite the first full paragraph on page 10 to read as follows:

In another specific embodiment, Zr tert-butoxide may be reacted with an oxidized surface near room temperature under ultra-high vacuum, followed by reaction with an alcohol to produce a hydrophobic coating. Examples of alcohols that can form such a monolayer include decanol, octadecanol, oleyl alcohol, and ~~dodecadieneol~~ dodecadienol.